DEPARTMENT OF TRANSPORTATION
ADMINISTRATIVE SERVICES DIVISION
1401 EAST BROAD STREET
RICHMOND, VA 23219

NOTICE OF CONTRACT RENEWAL

1. DATE……March 22, 2006

2. COMMODITY NAME……Motor Grader, 150 HP – 4WD

3. CONTRACT NUMBER……**VAPP 21362**

4. CONTRACT PERIOD……..March 10, 2004 through March 9, 2007
(With 2 one-year renewals remaining)

5. AUTHORIZED USERS……State Agencies and Other Public Bodies

6. CONTRACTORS FIN NUMBER……52-0408075

7. CONTRACTOR…….……McClung-Logan
1345 Mountain Rd.
Glen Allen, VA 23060

8. CONTRACTOR CONTACT PERSON……..Brad Hoffler

9. CONTRACTOR'S PHONE NUMBER……(804) 266-0000
FAX NUMBER (804) 266-3087

10. PRICES AND OPTIONS ……...See attached

11. DELIVERY..……60 - 90 Days

12. FOR FURTHER CONTRACT INFORMATION CONTRACT .……Caroline Hudgins
(804) 786-2725

13. FOR ADDITIONAL COPIES OF THIS AND OTHER CONTRACTS AND ANY ASSOCIATE CONTRACT CHANGES, CALL (804)-786-2725.

INSTRUCTIONS

1. Orders: Unless otherwise instructed by the Department of Transportation, institutions and agencies of the Commonwealth of Virginia may order items listed by issuing agency purchase orders (Form DPS-41-056) or by issuing their own purchase order form. Please forward copy of order to VDOT. – FAX – 804-225-4292 – ATTN: Caroline Hudgins

2. Virginia cities, counties, towns and political subdivisions may use their own form to order items listed in this contract

3. The applicable contract number, federal employer identification number (FIN) and item number (for itemized contracts) must be shown on each purchase order and copy.

4. Inspection on delivery or equipment and approval of vendor's invoice is the responsibility of receiving State Agency, Virginia City, county, town or political subdivision.

5. Any complaint as to quality faulty or delinquent delivery, or violation of contract provisions by contractor shall be reported to the Department of Transportation for handling with the contractor. Preprinted forms (DGS-41-024), by which to facilitate the notification of the contractor and this office of complaints, are available from the Division of Purchases and Supply (786 -3522)

6. SPECIFICATIONS: See Attached

7. **NOTE** – NEW **EVA FEE** THAT MUST BE **ADDED** TO ANY ORDER CREATED AFTER 7/1/06. SEE PRICING SHEET FOR INSTRUCTIONS.

MOTOR GRADER, DIESEL HEAVY DUTY, 150 HP 4WD
PRICE AND OPTION DATA

Base Unit Cost - **$115,280.78** Make & Model – **Volvo G930**

OPTIONS:

	Price
Rear Scarifier	$5250.31
Front Scarifier	$4016.66
Training Tapes	Included
MSRP discount for options not listed above	38%
Full Machine Extended Service Agreement – 3 years	$2,300.10
Engine & Transmission Extended Service Agreement – 5 years	$1,959.42
*** 2% VIRGINIA PARTNERS IN PROCUREMENT SURCHARGE HAS BEEN ADDED TO EACH UNIT PRICE.**	***DUE TO CHANGE IN EVA FEES EFFECTIVE 7/1/06(CAP RAISED FROM $500 TO $1500) –THE FOLLOWING ADJUSTMENT MUST BE MADE TO PURCHASE ORDERS CREATED AFTER 7/1/06:** **1) PURCHASE ORDER VALUE EQUAL TO OR GREATER THAN $150,000 – FLAT PROCESSING FEE OF $1,000 ADDED TO ORDER** **2) PURCHASE ORDER VALUE LESS THAN $150,000 AND GREATER THAN $50,000 – PROCESSING FEE OF 1% MINUS $500(ORIGINAL EVA FEE THAT VENDOR ADDED INTO ORIGINAL PRICING)**
Prices were increased by the allowable 6% PPI – effective 5/1/05.	

COMMONWEALTH OF VIRGINA
VIRGINIA DEPARTMENT OF TRANSPORATION
ADMINSTRATIVE SERVICES
SPECIFICATIONS

Heavy Duty Diesel Motor Grader – 150 HP

General: The grader is to be an articulated frame tandem drive machine. The machine must be capable of performing the Department's grading, ditching and snow removal requirements. Significant over-the-road travel is required for these operations.

Options: The specifications contain various options for purchase at the time the graders are ordered.

Each option shall be quoted for the cost of the option only installed on the base unit.

Weight and Dimensions: Machine weight and dimensions are to meet the requirements below. Weight is to include standard machine items and tire size, plus ROPS cab, as published in manufacturer's most current literature. Weight is not to include scarifier or other optional equipment.

	MINIMUM	MAXIMUM
Weight	30,000 lbs.	34,000 lbs.
Wheelbase	19' 4"	20' 5"
Turning Radius	---	25' 7"

Engine: The engine is to be diesel, water-cooled, with not less than six cylinders meeting the following requirements:

	MINIMUM	MAXIMUM
Displacement	414 ci	---
SAE Net Flywheel Power*	140 hp (104.4 kW)	170 hp (128 kW)
Rated RPM	---	2,500

***Note**: SAE power rating is base rating and does not include power boost provided by the specified variable horsepower feature.

Engine shall be furnished with variable horsepower feature which provides approximately 20% increase in horsepower in transmission ranges three and higher.

Engine is to include oil filter, fuel filter, alternator, starter, and muffler. If exhaust is vertical, a rain cap or deflecting elbow is to be furnished.

Engine is to have a heavy duty dual element air filter with pre-cleaner and restriction indicator. Air intake to the air filter is to be installed to draw from either engine compartment or outside. A butterfly valve or similar arrangement is to be installed in convenient position for operator to change for summer-winter operation. Systems designed to draw air from engine compartment full time will be acceptable.

Engine to comply with all current EPA standards for off-road vehicles.

Engine is to be furnished with water jacket heater. Water jacket heater is to be sized for extended use (such as over weekends) or have thermostat control. A cold weather ether starting aid or air preheater or glow plugs suitable for temperatures to -30° F. is to be furnished. If an ether starting aid is provided, it shall be the measured shot type with thermal close and a minimum reservoir capacity of 12 fluid ounces.

Engine coolant is to be ethylene glycol type antifreeze meeting the requirements of TMC RP-329 (fully formulated, low silicate, nitrite containing) mixed 50-50 with water to provide -34° F. protection. Antifreeze is to be on the current Penray® Fill-For-Life program approved list. Documentation should be provided with the offer to show that the coolant is on the list.

The engine is to be equipped with an alarm system, both visual and audible, for high engine temperature and low engine oil pressure. System is not to shut off engine. Manufacturer's standard electronic monitoring system may be used provided it features visual and audible alarm for at least high engine temperature and low engine oil pressure.

Engine is to have full hood side panels.

Engine is to be controlled by a hand throttle and an accelerator-decelerator.

Transmission: The transmission is to be power shift type, having a minimum of six speeds forward and three reverse. If transmission is direct driven, machine is to have an inching pedal. If a single pedal controls both brake and clutch, unit shall have a hand controlled valve to allow brake operation with and without disengaging the transmission. Transmission guard is to be furnished.
The final drive is to have a differential lock-unlock or automatic "no-spin".

Brakes: The service brakes are to be foot pedal controlled, either hydraulic, air, or air-over-hydraulic. The brake system shall be either wet disc at all four drive wheels, dry disc at all four drive wheels, or inboard wet disc on each tandem main drive axle. The system shall have a separate circuit either to each tandem or each drive axle. If system is air supplied, an air dryer is to be installed.
In addition, the service brakes shall have a secondary brake system to provide full braking application in the event of failure of either the engine, hydraulic or air pump, or either circuit to the tandems.
The service brake system, parking brake system, and secondary brake system are to conform to SAE ISO3450 – Earth-moving machinery – Braking systems of rubber-tired machines – Systems and performance requirements and test procedures.

Steering and Tires: The grader is to have hydraulic articulation and leaning front wheels power controlled from the cab. The steering system must be power assisted or full power.

Tires are to be 14.00R24 tubeless radial, 12-ply rating or greater, G2 tread. Rims are to be 10" wide. Tires are to have cut resistant tread and reinforced sidewall to prevent flex during operations generating side thrust. Tires must be Goodyear SG-2A or Michelin XGLA. Rear tandem tires are to

have peripheral clearance for installation of tire chains. Each machine is to be delivered with one spare wheel and tire assembly.

A secondary steering system is to be furnished. The system may consist of either accumulators, electrically driven components or ground driven system.

The steering system and secondary steering system shall conform to SAE J1511 - Steering for Off-Road Rubber-Tired Machines.

Electrical System: Electrical system may be either 12 or 24 volt. If a 24 volt system is used, it is to be equipped with a system designed to allow the use of a 12 volt, 20 amp continuous load without affecting the battery charging system. System is to allow for the operation of Virginia Department of Transportation (VDOT) 100 watt, two-way, mobile radios. It is to be similar to the DUVAC system manufactured by Sure Power Industries, Tualatin, Oregon. Voltage converter must be mounted inside of cab for protection.

Unit to be equipped with maximum starting and charging system capacities offered by the manufacturer.

Electrical Workmanship: Any electrical components added to the equipment by the original equipment manufacturer, selling dealer, body company, or aftermarket supplier shall use the best practices of the industry. Absolutely no Scotchlok™ or similar quick connectors shall be used in the electrical wiring.

A properly designed circuit with a fuse or circuit breaker for protection shall be provided.
External (outside of cab) electrical connections and wiring shall be in weatherproof enclosures or inside surface mount plastic junction boxes with covers. Junction boxes to be Betts Part #470041 or approved equal. To have internal terminal block for wiring junctions. To use compression fittings on jacketed cable, or accept plastic conduit (not vinyl tubing), to make a weatherproof seal.

Internal (inside of cab) electrical connections and wiring shall be in a protective enclosure to prevent accidental damage.

All wire ends (both external and internal) shall be fitted with the proper size spade, lug or ring terminals. Terminal to wire connection shall be properly crimped and/or soldered and protected with proper heat shrink tubing. All spade terminals or pin type wire connections shall be coated with a corrosion preventative compound, similar to Truck-Lite's NYK-77, designed for use with electrical switches, contacts and terminals.

Correctly sized grommets are required to protect wires wherever they run through panels. If panel separates interior and exterior surfaces, it shall also provide a weathertight seal. A grommet shall be provided even if it is necessary to use additional sealer to make the area weathertight.

Circle and Moldboard: All functions of the circle and moldboard are to be hydraulically controlled. This shall include circle rotation for a full 360° raising and lowering circle, shifting circle right and left, moldboard sideshift, moldboard pitch (tilt), moldboard bank cutting of not less than 90° from

horizontal, and moldboard "float" control. The grader is to be capable of performing necessary ditching operations of the Department, including operation with the moldboard completely vertical on both left and right sides (90° to ground level measured at the bottom of the cutting edge and at the face of the moldboard), and mid-range bank sloping with the heel of the blade to the outside edge of rear tires. All operations are to be performed from the operator's compartment.

The moldboard is to be not less than 12' in length, 24" in height, and 0.8" in thickness. Cutting edge is to be through-hardened not less than 0.62" x 6". Moldboard is to be equipped with replaceable overlay end bits.

Grader Hydraulics: The hydraulic system is to include two valves and circuits controlled from cab for operation of a snowplow.

The first circuit is for operation of a double-acting cylinder for up/down operation of a front-mounted snowplow. The hydraulic circuit with two lines is to be installed to front of the machine, terminating in proximity of front universal mounting plate. The valve controlling this circuit shall have a detented float position. Lines are to be terminated with 3/8" Parker Quick Coupling FF Series fittings (plow up to be Coupler FF-371-6FP and plow down to be Nipple FF-372-6FP), both nipple and coupler-mating halves shall be furnished. Mating halves on snowplow side need not include hose.

The second circuit is for operation of a power-reversing snowplow. The hydraulic circuit with two lines is to be installed to front of the machine, terminating in proximity of front universal mounting plate. The valve controlling this circuit shall be four-way, three-position, spring return to center, A-B-T type center condition (float center). To have lines and Parker Quick Coupling FF Series fittings as above, except 1/2" size with Nipple FF-502-8FP for plow left and Coupler FF-501-8FP for plow right. The system must be capable of satisfactory operation of power reversing snowplows presently owned by the Department. For reference, plows are similar to those built by Valk Manufacturing Company, Carlisle, Pennsylvania that have two single-acting hydraulic cylinders for angling the plow and operation of a spring loaded mechanical latch.

Hydraulic Fittings: Hydraulic fittings are to be in accordance with SAE J514 - Hydraulic Tube Fittings and SAE J516 - Hydraulic Hose Fittings.

Hydraulic Workmanship: Any hydraulic components added to the equipment by the original equipment manufacturer, selling dealer, body company, or aftermarket supplier shall use the best practices of the industry. All hydraulic lines are to be correctly sized and rated for system requirements. Any threaded components requiring sealant are to be treated with thread sealant. Teflon tape on fittings and other threaded connections is not acceptable.

All hydraulic components are to be securely attached as recommended by the manufacturer. Tubing and hoses shall be protected by grommets wherever they run through metal panels. Hoses shall not be installed at less than the manufacturer's listed minimum bend radius. Hoses shall be provided with a protective sheathing wherever abrasion may occur due to movement of components. Sheathing may be a heavy-duty nylon product or flexible steel product.

Cab: To be equipped with a steel operator's cab with ROPS structure.

Operator console and steering wheel are to be adjustable for operator convenience. Operator seat is to be load adjustable full suspension type. Seat and backrest to be padded and upholstered. To include seat belt.

Cab shall include the following:

safety glass,
electric front, rear and lower windshield wipers,
front and rear windshield washers,
air conditioning (R134a refrigerant),
hot water cab heater approximately 40,000 BTU,
defroster,
inside rearview mirror,
right and left side heated exterior break-away rearview mirrors,
horn,
and back-up alarm.

Lighting is to include:

two sealed beam or halogen headlights,
tail/stoplights,
turn signals,
interior dome light,
instrument lights,
sealed beam or halogen blade work lights, and sealed beam or halogen back-up/rear work lights.

Interior of cab to be furnished with the maximum noise suppression treatment available as listed in manufacturer's literature.

Machine to include manufacturer's standard gauges and indicators but must include at least the following:

tachometer,
hour meter,
fuel gauge,
articulation indicator,
engine temperature gauge and/or indicator,
oil pressure gauge and/or indicator,
transmission pressure or temperature gauge and/or indicator,
and torque converter temperature gauge and/or indicator (if applicable).

Miscellaneous: A vandalism protection group shall be provided to include as a minimum a locking instrument panel cover, locking filler caps for fuel tank, hydraulic tank, engine oil and radiator. A cab with locking doors is acceptable in lieu of instrument panel cover. Filler caps located behind locking

side hood plates are acceptable in lieu of individual locking filler caps. Padlocks need not be included if required for individual locking filler caps.

Front frame is to include a rigidly installed universal mounting plate for attachment of front snowplow. Rear frame is to include a drawbar.

A slow-moving vehicle emblem is to be mounted on rear of machine.

A metal toolbox with keyed locks or provision for a padlock is to be mounted to the grader.

Wiring, switch and fuse are to be installed for operation of a dual sealed beam revolving light or strobe light. (Light supplied by VDOT.) Wiring to terminate at roof of cab with approximately 3' of wire coiled to be routed when light is installed by State forces.

Grader to comply with all current OSHA standards.

OPTIONS

Option 1 - Rear Scarifier: To be equipped with rear-mounted scarifier having not less than five teeth 1" x 3" with renewable points and swath width of 42" minimum. Scarifier hydraulic control system shall be controlled from cab.

Option 2 - Front Scarifier: To be equipped with scarifier front (**forward of front axle**) having not less than five teeth 1" x 3" with renewable points and swath width of 42" minimum. Scarifier hydraulic control system shall be controlled from cab and shall include float control. Scarifier hydraulic system will be used to raise and lower a snowplow. The scarifier hydraulic system with this option will replace the first hydraulic circuit listed in the "Grader Hydraulics" paragraph on page 22.